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AUTHOR Harris, Ilene B.; Fenderson, Douglas A.
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ABSTRACT

A case study evaluation of the Bush Clinical Fellows Program, a fellowship program designed to enhance rural physicians' midcareer development and to improve rural health care delivery, is presented. Attention is also directed to the evaluation methodology and the implications of the evaluation approaches and the results. Two major evaluation approaches were used as frameworks for program assessment: a goal-oriented approach, and a case study approach. The goal areas were: improvement of quality of leadership in rural physicians' professional and personal development; and formation of linkages between physicians in rural communities and their preceptors at host medical centers. Each fellow initially formulates goals and evaluation criteria, after which the fellow completes monthly reports detailing progress toward goals and incidents related to the process of taking a sabbatical. The evaluator and program administrator periodically conduct site visits, and interviews are conducted with fellows, policy board members, and community references. Outcomes of the fellowship program included leadership development in community health care delivery and professional and personal renewal. It is proposed that the program can be used as a prototype for continuing education of other professionals. Appended materials include a bibliography and capsules of fellows' professional data, fellowship programs, and areas of emphasis. (SW)

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The Bush Clinical Fellows Program: Case Study Evaluation of an Innovative Approach to Continuing Education for Physicians

Ilene B. Harris, Ph.D.

Douglas A. Fenderson, Ph.D.

University of Minnesota Medical School, Minneapolis

and

The Bush Foundation, St. Paul, Minnesota

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The Bush Clinical Fellows Program: A Case Study Evaluation of an Innovative Approach to Continuing Education for Physicians

ILENE B. HARRIS and DOUGLAS A. FENDERSON, University of Minnesota Medical School, Minneapolis, and The Bush Foundation, St. Paul, Minnesota

This paper reports a case study evaluation of a fellowship program designed to enhance rural physicians' mid-career development and improve rural health care delivery. Case study data, including log diaries, critical incidents, and structured interviews, were analyzed to elicit themes pertaining to the impact of the Program on physicians and their communities. Impressive outcomes included: leadership in community health care delivery and professional and personal renewal. This program can be a prototype for continuing education of other professionals. The case study evaluation methodology may provide guidance for evaluating other fellowship programs which, until recently, have not been systematically evaluated.

THE BUSH CLINICAL FELLOWS PROGRAM: CASE STUDY EVALUATION OF AN INNOVATIVE APPROACH TO CONTINUING EDUCATION FOR PHYSICIANS

Ilene B. Harris, Ph.D. and Douglas A. Fenderson, Ph.D.
University of Minnesota Medical School, Minneapolis
and
The Bush Foundation, St. Paul, Minnesota

The Bush Clinical Fellows Program (funded by the Bush Foundation, St. Paul, Minnesota) is intended to enhance rural physicians' mid-career development and improve rural health care delivery through an innovative approach to continuing medical education. Each year, selected rural physicians in mid-career are granted fellowships enabling them to pursue individually designed programs of full-time study ranging from three to twelve months at institutions of their choice. This type of program has the potential to serve as a prototype for continuing education and mid-career development of physicians, as well as other professional groups such as lawyers, nurses, and dentists, who do not currently have institutionalized sabbaticals. The evaluation approaches themselves may provide guidance for evaluating fellowship programs which, until recently, have not been systematically evaluated (1). The purposes of this paper are to: 1) describe the Program and its background; 2) describe the evaluation methodology; 3) report selected evaluation results; and 4) discuss the implications of the evaluation approaches and the results.

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Requests for reprints should be sent to: Ilene B. Harris, Ph.D., University of Minnesota Medical School, Office of Curriculum Affairs, Box 33 Mayo Memorial Building, 420 Delaware Street SE, Minneapolis, MN 55455.

BACKGROUND

For the past decade, health policy planners and medical educators have focused attention on the need to improve health care delivery in rural areas (2,3). Until recently, this problem has been addressed primarily in terms of increasing the number of primary care physicians practicing in rural areas through changes in medical school admissions policies (4,5) and development of new training programs (6). Despite the success of some of these efforts, improvement of rural health care delivery confronts special problems related to the professional situation of established rural physicians. These practitioners may have difficulty in maintaining updated clinical knowledge due to heavy workloads and remoteness from major medical centers. They are more likely than urban physicians to be called upon to provide clinical, administrative, educational or medically-related community leadership; yet like urban physicians, they have had little formal training for these endeavors. Moreover, mid-career physicians, like other mid-career professionals, may be undergoing a mid-career crisis of confidence.

Several types of programs, such as the Area Health Education Centers, the University of Minnesota's Rural Physician Associate Program, and "visiting professor" programs, do address some of the needs of rural physicians by providing meaningful links with major medical centers. Moreover, continuing education programs are becoming increasingly accessible to rural physicians (7). However, none of these programs adequately addresses rural physicians' needs for sustained study of new or expanding areas of medicine and development of leadership skills; and none adequately addresses the problem of physicians' mid-career crises.

The Bush Clinical Fellows Program is designed to address these problems through fostering the professional development of established rural physicians who have demonstrated clinical, administrative, or educational leadership in their communities. The impetus for this approach was the Bush Foundation's extensive positive experience with leadership development through fellowships, combined with its new interests in improving rural health care (8).

The Program has been developed and monitored by an administrator (D. Fenderson) and a Policy Board whose members were selected to reflect geographic and specialty distributions in Minnesota and on the basis of experience and leadership in medical practice and education. The essence of the Policy Board's concensus on program goals, concepts, and selection criteria is encapsulated in the Program's information brochure for applicants, as follows:

> *Applicants must be physicians currently practicing in non-metropolitan areas . . . of Minnesota, in . . . primary care settings. They should also be at least 35 years of age with ten or more years of clinical practice. Applicants should be able to state clearly their needs, and opportunities for application of new skills and knowledge, both as to their own career development, and to the anticipated benefit to the community they serve. Preference will be given . . . where prior indications of innovation or leadership, and local needs and opportunities, indicate a likelihood of significant improvement in health care delivery and/or patient care quality.*

These criteria for selection have been applied in a process which includes Policy Board review of application materials, site visits (if necessary) and interviews at a yearly selection seminar. The selection seminar serves the additional function of orienting applicants to new ideas about health care delivery. Successful applicants pursue programs generally ranging from

three to twelve months at institutions of their choice; they receive stipends of $2500 per month during the fellowship period, together with tuition support of up to $2500 and a travel allowance of up to $500.

The Program has now selected three cadres of Fellows. From a total of 28 viable applications, 17 Fellowships have been awarded. Most of the first group of seven Fellows have completed their programs; some have been back in practice for almost a year; a second cadre of four Fellows (one of the second group of five Fellows did not pursue a program) have just completed their programs. A third cadre of five Fellows are now in various stages of their programs. What tentative assessments can be made of this approach to improving leadership in rural health care delivery through a rural physician mid-career sabbatical program? In the next sections, we will describe the evaluation methodology and present selected results. These results will be based on data from the first two groups of Fellows who have now completed their programs.

EVALUATION APPROACHES AND METHODOLOGY

Two major evaluation approaches have been used as frameworks for assessment of this program--a goal-oriented approach (9, 10, 11) and a case study approach (12, 13, 14). Why and how have these two approaches been combined in evaluating this program?

A goal-oriented approach has been chosen as one framework for evaluation because we believe that one fundamentally important purpose of evaluation is

to assess how well program goals have been achieved (15). Therefore, the Policy Board, as noted, formulated broad goal areas to serve as general criteria for assessment of outcomes. These goal areas were: 1) improvement of the quality of leadership in rural health care and rural health care delivery; 2) enhancement of rural physicians' professional and personal development; and 3) formation of linkages between physicians in rural communities and their preceptors at host medical centers. The Program goals must be achieved through physicians who pursue diverse individualized programs and goals in response to diverse professional and personal interests and community needs. This individualization, and the consequent diversity of physicians' programs and goals, complicates goal-oriented program evaluation. The evaluation design addresses the problem posed by this diversity in the following manner. Fellows formulate individualized program goals and criteria for success at the beginning of their programs, with the assistance of the evaluator. Then, the outcomes for each physician are assessed in relation to these pre-specified criteria. Fellows' outcomes are scrutinized to assess the Program's outcomes which are, in essence, the sum of individuals' outcomes, categorized according to generic Program goal areas. This activity of formulating goals and assessment criteria serves not only as a method for evaluating the Program, but also as a method for enriching it. It helps Fellows guide their activities, assess their progress, and learn generalizable program design and evaluation skills.

Goal-oriented evaluation, despite its value, is not totally adequate for assessment of this program since its evaluation clearly presents special challenges. First, there is little extant experience with mid-career

sabbatical programs for rural physicians. Therefore, unplanned and serendipitous processes and outcomes can be expected and should be identified. It is not sufficient to assess a complex emerging program only within what Stake (16) labels as a "preordinate specification" design. Second, given the uniqueness of this Program, it is of particular interest not only to assess outcomes, but also to characterize the experience of pursuing mid-career sabbaticals. Third, as noted, the Program goals must be achieved through physicians who pursue diverse individualized programs and goals in response to diverse professional and personal interests and community needs. We have complemented goal-oriented evaluation with a case-study evaluation approach in order to meet these evaluation challenges (12, 13, 14, 16). Namely, we have qualitatively but systematically analyzed Fellows' experiences, outcomes, and impressions, both to better understand and illuminate the mid-career sabbatical experience and to assess the impact of the Program. Through these analyses we have identified and validated themes pertaining to Program processes and outcomes and suggested possible explanations for outcomes which are, in fact, more positive than might have been envisioned.

A systematic process of data collection has been designed to support the goal-oriented and case study evaluation design. The approach to data collection and treatment, and data interpretation, to be described, is consistent with Stake's views about evaluation standards. He states, "Much of the error people make in . . . evaluations can be avoided by deliberate readiness, care, replication, and cross examination. The evaluator does not need to rely on preordinate objectives, experimental controls, or criterion tests to minimize evaluation errors." (16, page 1)

Each Fellow, as noted, formulates goals and evaluation criteria at the beginning of his or her program. Fellows then complete monthly reports detailing progress towards their goals, serendipitous outcomes, and important incidents related to the process of taking a sabbatical; they are encouraged to submit log diaries and critical incidents. The evaluator conducts in-depth, structured interviews with Fellows at the beginning of their programs, mid-way through their programs (depending on program length and site of Fellowship), at the end of the programs, and periodically after their return to practice. Persons identified by Fellows as references in their communities are interviewed after Fellows have returned to practice to help assess community impact. The evaluator and program administrator periodically conduct site visits, as appropriate and needed. Also, Policy Board members have been interviewed to assess their developing views about Program goals and other important issues. This evaluation strategy flows from Stake's concept of "responsive evaluation" which emphasizes that evaluation should address the concerns of those who are the primary audience for the report (16).

All interviews--with Fellows, Policy Board members, and community references--are summarized in "memos to the record." All data--Fellows' statements of goals and evaluation criteria; monthly reports; log diaries; and interview records--are scrutinized by the evaluator to "tease out" themes pertaining to Program impact and process; these themes are displayed in grids and checked by the evaluator against remaining data. The evaluator also checks the validity of themes and interpretations by discussing them with Fellows.

RESULTS

Many evaluation questions have been addressed through this goal-oriented, case study evaluation. Here, results will be presented in relation to selected questions. What were the views of Policy Board members concerning Program goals? What types of programs and goal areas did Fellows actually formulate and follow? How well were Program goals achieved through the experiences and achievements to date of the first two groups of Fellows? What is entailed in the process of pursuing mid-career sabbaticals? What special issues and problems have been identified?

What Were the Views of Policy Board Members Concerning Program Purposes and Goals?

In a series of meetings during the Program development stage, Policy Board members reached a concensus about Program purposes and goals which emphasized community health care benefits, achieved through professional and personal development of mid-career primary care physicians. How did the Policy Board's views of Program purposes and goals change and develop as they gained experience in implementing the Program? What dimensions and facets do they append, individually and as a group, to these general emphases? The evaluator interviewed nine Policy Board members (the tenth member was out of the country for a year) after the first cadre of Fellows had completed their programs and the second group had been selected, to assess their views about Program goals and other important issues.

Policy Board members generally view the Program's goals in terms of mutual physician and community benefit. Yet there is a range of views concerning: the relative emphasis on professional and community benefit; appropriate motiviations for Fellowship study; and the meaning of community benefit.

The majority of Policy Board members (n=6) strongly emphasize mid-career renewal as a primary goal. A composite predominant vision of the Bush Fellow (espoused by six of the Policy Board members)--their personal and professional situations, an ideal Fellowship program, and hoped-for outcomes--has the following dimensions. Policy Board members envision well-established physicians who may be in a 'down period,' and feel that they are 'missing meaningful directions in their careers.' They may be experiencing a mid-career crisis, indeed a crisis in confidence and self-esteem as they compare themselves with newly trained physicians. Whether in a group or a solo practice, they may feel 'isolated' in the sense of having a limited view of possibilities for renewal and change; they may feel 'devoured' by hectic practices, with little time to reflect on personal and professional goals or to develop meaningful interests within their practices. As a result of any or all of these problems, they may have even considered leaving rural practices or pursuing alternate careers.

A Bush Fellowship would give these physicians the opportunity to pull away from their practices for sustained study in areas that would contribute to a primary care mission and community benefit. These physicians would update their medical knowledge through 'state of the art' study at major medical centers; they would make significant shifts in their careers, perhaps in administrative or health planning leadership; they would expand

their horizons and discover new interests and approaches to the practice of medicine; they would establish collegial and referral linkages with physicians at host institutions.

Ideally, these physicians would return to their practices feeling revitalized, rejeuvenated, and enthusiastic about practicing medicine. They would have alleviated self-doubts, increased their self-esteem, and increased their confidence in their medical knowledge and practice. They would develop meaningful interests in their practices and hopefully assume leadership roles in improving health care, through contributions to addressing group problems, both community and practice groups. If they had contemplated alternate careers, they would feel more comfortable with their present practices, in that they could alter emphases and directions and achieve meaningful career goals within these practices.

The following Policy Board members' comments illustrate the flavor of the predominant vision.

> *Give physicians in mid-career one more opportunity to expand their horizons, so they could continue to practice another 15 or 20 years without saying to themselves, 'If only I could have . . .' Help them to alleviate self-doubts and become more confident about the quality of their practices . . . to reduce their fears of changing, of not being able to hack it, or not comparing favorably with younger, more recently trained physicians. . . . Envision a doctor in a busy solo or small group practice. Provide him with a chance to leave that setting for a few months, take a look at what he or she was doing, ask, 'Is that what I wanted?' and hopefully respond, 'Yes, I'm comfortable with it. . . .' Envision larger practices which are so busy they seem to 'devour' physicians. Help these physicians to develop meaningful interests within their practices and time within their practices to pursue those interests by such means as adding other physicians or using non-medical personnel, with a subsequent impact on colleagues.*

* * * * * *

In mid-career, there is a crisis, the same old questions, night call, and runny noses. Medical practice has changed; it's a different ball game. Encephalitis is no longer a major concern; allergy, neonatal care, and school behavior problems, are now more prominent problems. Yet, mid-career physicians refer these problems because they are not confident of their skills in handling them. Mid-career physicians need to get away, to get different angles about how to practice medicine; they need to develop new outlets and feel more comfortable with new approaches to medicine and the physician role. They should develop administrative skills and involve themselves in their communities, perhaps as team physicians or members of school health assessment teams. As an outcome, physicians who might have considered leaving medicine, would remain, enrich their careers, and benefit their patients and communities.

Three of the nine Policy Board members interviewed view physicians' perceptions of community problems, rather than mid-career crises, as the ideal motivating factor for Fellowship study; they view community benefit primarily in terms of addressing group (the community or the practice group) problems, e.g., hospice care or clinic patient education, rather than in terms of physicians' improving the medical care of their own patients; they view ideal programs as aimed primarily at developing leadership, administrative, investigative, or educational skills, rather than clinical skills. The flavor of this emphasis is captured in the following comments.

Ideally, the initial impetus would be a sense of responsibility for dealing with pressing community health problems. The Program would legitimate for rural physicians . . . a period of time away from practice to obtain new or enhanced skills to address such problems. For example, a rural physician might be concerned about geriatric care and design a program intended to develop skills in organization, communication, and geriatric health care delivery; a physician might be concerned about a community problem of teenage pregnancy and pursue sabbatical studies in sex education, patient education, and learning theory. The focus should be on group (community or practice) problems, not improvement of clinical skills for the physician's own patients. Many traditional continuing medical education programs are available for the latter purpose. The major thrust should be development of organizational, administrative, educational, economic and communication skills to facilitate change.

Although Policy Board members differ somewhat in their views concerning the relative emphasis on community and individual benefit, and their views about

the meaning of community benefit, their view, in general, of Program purposes has the following dimensions:

1) improved quality of health care and health care delivery for the community through physicians' leadership in addressing group (community and practice group) problems and through physicians improving direct patient care;
2) development of physicians' professional and personal potential as they develop and apply clinical and leadership skills and experience a process of "mid-career" renewal; and
3) forging of collegial links between rural physicians and physicians in host institutions.

The Policy Board members' views of Program purposes and goals, categorized in generic goal areas, but richly illustrated with interview data, comprise a contextually rich framework for evaluating how well Program goals have been achieved.

What Types of Programs and Goals did Fellows Actually Formulate and Follow?

With one exception, each Fellow actually entered the Program and achieved, in essence, the major goals for which his or her program was approved. Table I summarizes, in capsule form, pertinent professional data, program elements, and the areas of emphasis of each of the 11 Fellows (in the first two groups of Fellows) for which outcome data is reported in this paper. In order to ensure anonymity, each Fellow is assigned a letter code so that the reader can trace outcomes to particular Fellows.

The outcomes meet and in fact surpass the Policy Board's hopes for the Program, no matter which of the criteria for success are applied. Almost all Fellows achieved impressive outcomes in the areas of: 1) community benefit (whether viewed in terms of community-group problems, practice-group concerns, or direct patient care); 2) professional and personal renewal; and 3) collegial linkages with physicians in host institutions. Outcomes will be reported in these three generic goal areas. Tables II and III, and IV-A and IV-B, present summary grids of outcomes, cross-tabulated by Fellows and specific outcomes in each goal area. Examples are presented below of some major outcomes. In each case, Fellows are identified by their designated letter codes.

Community Benefit: Community-Group and Practice-Group

Examples of outcomes in the area of group (community or practice) benefits are particularly impressive and perhaps unexpected, since many of the initial programs had a distinctly clinical, direct patient care orientation. These outcomes are summarized in Table II. Some particularly noteworthy outcomes will be described.

Dr. D has been instrumental in implementing an innovative Smoking Prevention Program in the local middle school. This program, which uses such techniques as group discussion led by school social leaders and assertiveness training to resist peer pressure, is viewed as the most effective of the smoking prevention programs (Review of Educational Research, Fall 1980). To date, it has been implemented only in schools near university centers: the University of Minnesota, the University of Texas (Austin), and Stanford University; this is the first time it has been implemented in a

rural community. Dr. D attributes this striking outcome to the interest he developed in the program while at the University of Minnesota's Laboratory of Physiological Hygiene.

Several of the Fellows have been instrumental in developing clinic-wide patient education programs and in promoting preventive medicine in the community. One of them (Dr. B) is working with the clinic nurse patient-educator to develop a patient education program for chronic problems, e.g., allergy, diabetes, hypertension, to include written handouts and patient support groups. He commented, "The message would be, 'You can help yourselves. The doctor doesn't have a magic wand.'" Another (Dr. D) was instrumental in helping the dietician start a popular behavior modification weight reduction course. He also has talked the hospital auxiliary into sending every new baby home with a carseat, an important preventive health measure. Dr. E has promoted risk reduction community-wide by promoting "Heart Savers" classes with community groups. These classes focus on risk factors and responses in cardiac emergencies. To date, since November 1980, over 300 people have attended. This Fellow is, in general, becoming a community "guru" on risk reduction, with several newspaper reports to his credit. He is excited about a variety of new plans, including: public information sessions, "unsmoke" programs, and business on-site exercise programs.

Dr. A. has taken leadership in promoting the hospice concept in his area. He is working with the hospital long-range planning committee, physician colleagues, other health care personnel, and clergy to explore the use of hospice approaches. He has presented in-service sessions on

hospice care for nursing staff, coordinated a regional day-long hospice conference, and lectured on 'care of the dying patient' to second-year medical students at Mayo.

Dr. K. has taken leadership in emergency medicine, both in his community as well as in the metropolitan area. He has used refined administrative, negotiation, clinical and educational skills in organizing the local hospital emergency system (E.S.), and upgrading the E.S. to the rank of an area center. In pursuit of these goals, he has served as E.S. director and promulgated a plan for full-time E.S. day coverage. He has upgraded medical personnel skills through developing an educational program based on "adult learning methods." As a result, all physicians and nurses involved in the E.S. passed the Advanced Life Support exam. He has instituted routine case reviews and a monthly acute care conference. The E.S., as a result, has received external "stamps of approval"; the ambulance service has been accepted as a member of the county emergency medicine system; and the Fellow and hospital administrator have been appointed to the county emergency medicine council. There is a growing focus on emergency medicine in the community as reflected by the purchase of a third ambulance and by the administration's commitment to build a new emergency room. Dr. K is also becoming a leader in emergency medicine, beyond his local community. He is on a committee to develop area-wide E.S. protocols and procedures. He has been asked by a metropolitan hospital to help design a five-to ten-day E.S. Fellowship directed to the needs of area physicians involved in E.S. work; and he has been asked to be on the faculty of a course at Mayo Clinic for rural E.S. physicians. As he commented, "The whole thing has snowballed."

Several Fellows have demonstrated unusual leadership in their practice groups. One (Dr. G) persuaded his colleagues to recruit three new physicians into their practice group. He commented, "I sold the concept that we were all on a treadmill and that we should slow our paces to get time to develop meaningful interests." He attributes this outcome directly to the opportunity provided during his Fellowship to broaden his horizons. As a result of adding the new physicians, he has had time to pursue interests in hospital planning, teaching, and anesthesia. Another (Dr. D) also persuaded his colleagues to add another physician to their practice, so they could all spend more time with their patients, focusing on preventive medicine. Another (Dr. K) has been involved in promoting the interests of his practice group through: 1) serving as Chief of Staff; 2) implementing an evaluation of the Chief Executive Officer: 3) spearheading negotiations for purchase of a building needed for clinic expansion; and 4) participating in plans for hospital remodeling. Some other noteworthy examples include: 1) introduction of "state of the art" anesthesia practices in a local hospital, through purchase of up-to-date equipment, introduction of protocols and risk ranking systems, and training of personnel (Dr. G); 2) leadership in development of an out-patient chemical dependency treatment program (Dr. G); and 3) development of a training program for medical consultants to local health agencies (Dr. F).

Community Benefit: Application of New and Refined Knowledge in Direct Patient Care and Clinical Contacts with Colleagues

Examples of outcomes in this area are legion, and perhaps expected, given the types of clinical preceptorships which were the core of many Fellows'

programs. These outcomes are summarized in Table III. Noteworthy examples include: 1) application of "state of the art" anesthesia procedures to improve patient care (Dr. G); 2) application of up-to-date and practical allergy testing (Drs. B, D, and J); 3) refined application of pulmonary function tests (Drs. D and J); 4) application of "state of the art" cardiology prevention, diagnosis, and treatment approaches to improve patient care (Drs. A, C, D, E, G, and K); 5) application of up-to-date dermatology approaches (Drs. D and J); and 6) use of microsurgery techniques to reimplant partially severed fingers, repair nerves, and repair tubal pregnancies (Dr. I).

Some patient care outcomes will be briefly detailed to illustrate the flavor of outcomes in this area. Dr. G reports that he is applying 'state of the art' knowledge of anesthesia procedures to improve patient care, including: 1) use of multiple psycholeptic drugs to keep patients awake but pain-free; 2) use of the mechanical ventilator; and 3) sophisticated monitoring of biophysical functions during anesthesia. Dr. I reports that she now feels "on a par with other allergists," and is using updated allergy treatment approaches to improve direct patient care. For example, she has ordered and is now using new patch testing materials recommended by the American Contact Dermatitis Association. She is also using a medicine flow sheet (developed at the University of Minnesota) which allows clear visualization of asthma patients' progress. Dr. D reports that "the greatest impact of (his) Fellowship has been in the area of preventive medicine." He now takes more time with each patient to do more complete cardiovascular exams and stress the importance of exercise, non-smoking, and reduction of stress, weight, and salt intake. He is most gratified by patients' compliance and

by outcomes such as decreasing blood pressure, without medication. The result has been "greater satisfaction in practice." Dr. E reports that he is applying refined cardiovascular prevention, diagnosis, and treatment skills in providing "state of the art" cardiology care to his patients, through more complete examinations and "use of all the new invasive and non-invasive diagnostic/management procedures."

Individual Benefit

Many outcomes, although associated with community benefit, redound primarily to the individual physician's benefit; these outcomes can be characterized in terms of personal and professional renewal. These outcomes are summarized in Table IV-A. This renewal has many facets. For example, many Fellows report a sense of "excitement" and "joy" about developing up-to-date clinical knowledge and skills (Drs. B, C, D, E, I, J, and K). For example, Dr. B reports that he has 'developed habits of reading and independent study which are holding over.' He now reads three to four times as much as he did before his Fellowship and makes a habit of pulling journal articles which he keeps in a stack on his desk and goes through daily. Dr. I has found it a "joy" to become up-to-date in allergy care and plans to find time to study for Allergy Boards. Dr. K reports that he has 'learned again how to read and study.' He has asked himself, "Is it possible to create within my practice time for reflection and innovation?" As a result, he has decided to continue this type of Fellowship experience on a smaller scale, one day a week.

Many Fellows have reported more satisfying practice situations, which they attribute to changes in interests and skills developed during their Fellowships. For example, Dr. B reports that the greatest change for him has been an increase in routine dermatology care. This had been a "side trip" for him, but many patients had asked his colleagues, "When will Dr. B be back?" to handle their dermatology problems. Also, whereas Dr. B used to see 30-35 patients a day, he now sees 23-26 patients a day in order to provide more holistic patient care, as well as to handle dermatology problems along with other problems in the same visit. Dr. I has also made significant changes in her practice situation. A major program goal for her was to expand to a full-time practice. This goal has been achieved in that her practice has been "significantly busier this year, primarily with allergy and dermatology patients." She is so busy that her nurse now gives shots and administers medications, tasks she herself had previously done. In addition, Dr. I is actively seeking to change her physician role and image by using all patient allergy visits as vehicles to discuss other medical and psychosocial problems. Consequently, she is beginning to function as a primary physician for many patients, which she finds to be "fun" and "interesting."

Many of the Fellows report that their Fellowship experience has had a positive impact on their family and their family relationships. Dr. D for example, repeatedly reported that his family (who moved to the Twin Cities with him) also had a revitalizing experience, through changing their environments and developing new interests. Dr. G noted positive changes in family relationships during his Fellowship period, which he attributes to having had more time to parent. He commented, "Now, I am determined not to sell my family as short as in the past."

One of the most impressive, and perhaps unexpected, outcomes of the Program is the scope and intensity of revitalization experienced by almost all Fellows. This sense of renewal is powerfully expressed by several of the Fellows:

> *Before my Fellowship, I was in a rut and feeling threatened by the competence of newly-trained family practitioners. During my Fellowship, I enhanced my confidence and self-esteem, through successes in leadership and refined clinical skills. It was scary, intellectually and financially, but I proved I could do it. At 45, I am lucky to find out that I do have marketable skills and that I am returning to my community because I chose to return. I missed my patients and colleagues and feel great about returning. I am certain I will get respect and support there for pursuing new dimensions in my practice.*

> *I had begun to find my practice boring and wondered, 'Am I doing what I want to be doing?' For me, the benefits of the Fellowship were much more than the scientific, medical knowledge I learned. I have emerged with a sense of confidence in my abilities as a physician and pride in my medical practice. I have had time to reflect on my practice, but also time to relax and evaluate my goals for the future. I now find myself anxious to return to my practice, feeling refreshed, revitalized, and enthusiastic about implementing new approaches in my practice.*

Collegial and Referral Linkages with Host Institutions

It was hoped that through this Program Fellows would establish continuing collegial and referral linkages with physicians at host institutions. In fact almost all Fellows have reported on-going substantive contacts with their preceptors (See Table IV-B). For example, Dr. C has come to view some physicians in the nearest large community (Sioux Falls, SD), where he had taken a preceptorship, as a center for 'referral and colleagueship,' noting that he 'had talked to many physicians there on the phone for years, but never met them.' Dr. I maintains collegial and referral links with her preceptor at the University of Minnesota; she calls him for consultations

and uses his laboratory services. Dr. K (who practices in a community near the Twin Cities) has established collegial relationships with emergency service directors at various Twin Cities hospitals where he had preceptorship experiences during his Fellowship; he now calls them directly to discuss problems that cross the boundaries of different ambulance services.

What is Entailed in the Process of Pursuing Mid-Career Sabbaticals?

This question is important for several reasons. First, there is little extant experience with mid-career sabbaticals for rural physicians and it is important to study the character of this experience. Second, study of this experience can help to account for outcomes. Third, if persistent patterns are discerned, knowledge of these patterns can help to guide future Fellows.

Our case study analysis suggests that there are consistent patterns and themes in the Fellows' experiences, despite diverse interests and circumstances. Among these themes, the most important relate to: 1) the transition from practice to Fellowship; 2) fitting into the fabric of clinical training and designing programs; and 3) the transition from Fellowship to practice. Each of the patterns will be discussed and illustrated.

The Transition from Practice to Fellowship

Almost all Fellows experienced some discomfort in making the transition from practice to Fellowship. During this period, Fellows must adjust from

a structured practice situation to an unstructured Fellowship situation in which they must personally instigate all actions related to their goals. Dr. G commented that, 'as a physician locked into a busy, structured schedule, he had yearned for time to grow, but at first found it unnerving to productively structure life as a student without the demands of a practice schedule.' Most of the Fellows have resolved these difficulties through a process of learning to set priorities. Dr. K's comments about the problems he encountered during this transition, and the learning process stimulated by these difficulties, is typical of what other Fellows report.

> *The greatest impediment in the first month of my Fellowship was the discomfort I felt in having responsibility for time commitments with a completely unstructured schedule. I now recognize how totally the life of a practicing physician is structured by others. To move out of this has been threatening. I have found an abundance of opportunities to enrich my education. Many conflict in time and some are more valuable than others. I am developing the skills to set priorities and make selections.*

During the transition period, Fellows must also adjust from the physician role, and their relationships with patients, to the student role. This adjustment has several facets. First, as Drs. G and I commented, 'physicians become accustomed to the aura of the physician role and find it disconcerting to take on the student role.' Second, Fellows tended to miss their patients at first. For example, Dr. G reported that he 'actually experienced the classical symptoms of situational depression which he attributed to walking away from his practice and patients--a seasoned physician--and becoming a student.' Third, Fellows must adjust to student-preceptor relationships. For example, Dr. H commented, "I'm not sure how I feel about being a lowly resident. Beepers, call schedules, keys, room assignments, meeting and getting to know my teachers. Scary to me." He

adds, "Finding it hard to hold my tongue and remember I am the student. So long I've made the decisions." Each of these types of adjustments give Fellows the impetus to look at themselves and their roles in new ways.

Also, during the transition period, although Fellows reported working hard--some as many as 80 hours a week--they still have found that they are adjusting as Dr. D commented, "to a slow-moving pace as compared with a hectic clinical practice." Dr. K portrays this situation vividly. Mid-way through his Fellowship, he helped out in his clinic during a flu epidemic. He commented: "I had forgotten how much pressure is on the physician from a time standpoint. . . . There is no time to think." While the change in pace has at first been disquieting for most of the Fellows, it has also probably been one of the most salutary aspects of the Fellowship experience. As Dr. D commented, "the slow, unstructured pace provided much needed time for reflection about future goals and implementation of new ideas and practices in my community." This theme was echoed by almost all of the Fellows.

Fitting into the Fabric of Clinical Training

Almost all Fellows have made special adjustments to fit into the fabric of clinical training, a situation in which they are a unique group, neither medical student nor resident. In this category, we include issues related to: 1) defining directions and goals for an entire Fellowship or for specific segments; 2) Fellows' roles in host institutions; 3) supervisory and collegial relationships with mentors, preceptors, and

other students; and 4) adjusting to different clinical millieus.

Defining Directions and Goals. Almost all Fellows experienced some initial concern or difficulties with respect to defining goals in general and arranging clinical experiences. For example, Dr. K has periodically asked himself, "Should my goals be broad and flexible, or narrow and specific? Should I explore many areas or focus on a few specific areas?" After much cogitation about this issue, most Fellows have formulated clearly defined broad goals, but have been flexible in altering emphases and specifics. Dr. K commented, "It is important to have overall goals and to work to achieve them. Nevertheless, flexibility is important. Physicians are inherently goal-oriented and work like race hourses. It is self-defeating to the purposes of a sabbatical to set inflexible goals." Dr. K agrees, commenting, "I have been goal-directed, but often, one cannot predict what will be of value. I sift through the sea with a magnet. This has helped me to achieve more and I have scanned many options for the future."

Fellows' Roles in Host Institutions. On the whole, Fellows have been warmly welcomed at host institutions. For example, Dr. D commented that he had 'received a warm reception and been a welcome guest in every preceptorship setting.' Nevertheless, many Fellows mentioned difficulties fitting into the fabric of clinical training, due to ambiguous expectations about Fellows' needs and the uniqueness of their positions. For example, Dr. B commented, "I am not accepted as a peer in any one group--staff, residents, interns, medical students; so that I find myself conforming to each little group wherever I happen to be at that time. Usually after the

first week or so, people accept my presence, seem to work along well, and do seem to be quite cordial." Dr. C commented, "The physicians at Sioux Falls were cooperative, but I think they find it a little awkward to have a practicing physician present." Moreover, Fellows find themselves competing with residents and students to do procedures and obtain valuable clinical experiences. Dr. D noted that in pulmonary medicine at the University of Minnesota, 'although there were always people available to answer questions, he found himself competing for experiences with residents and students.' He commented, as did many other Fellows, "One needs time to build trust."

Supervisory and Collegial Relationships with Mentors, Preceptors, and Other Students. Among the most important Fellowship experiences involve relationships with mentors, preceptors, and other students. Preceptors serve many roles for Fellows: guides, models, and colleagues. Dr. T valued the guidance and supervision provided by his preceptor in microsurgery. He commented, "The most positive thing was to improve my techniques in microsurgery, under the guidance and supervision of an expert. For many years, I have practiced surgery alone and it has been a very rewarding experience to have someone looking over my shoulders to help me learn from and correct my own mistakes." Dr. H felt that "exposure to geriatric role models--in their medical and political roles--has been most enlightening." Dr. B noted that, 'half of his teachers were younger than he and that it took time to get over their deference to his age and bacground, but that soon a nice balance of student and colleague was reached.'

Fellows' relationships with other students and residents are complex. Due to their experience, Fellows have the potential to serve as preceptors for students and playing this role serves to enhance their self-esteem. Dr. D commented, "I've enjoyed contacts with various students and discussing medicine in rural Minnesota with them. I feel I've been helpful in teaching various aspects of medicine." He believes that his contacts with medical students and their strong interest in his practice experiences and his Fellowship activities have 'enhanced his self-esteem.' At the same time, as noted, Fellows do find themselves in competition with other students for clinical experiences.

Fellows must also adjust to a variety of clinical milieus. In general, Fellows' experiences in different clinical milieus helped to broaden their horizons, but also to enhance their confidence in their medical practices. Dr. B's experience at Mayo Clinic, for example, provided the impetus for giving even greater emphasis to holistic patient care; he came to view the primary care provided by his clinic as an important and special contribution to health care delivery. Dr. D commented, "There are better minds at the medical centers in the Twin Cities, but there may be better, more coordinated patient care in my community."

The Transition From Fellowship to Practice

Generally, Fellows have looked forward to their return to practice. As Dr. K commented, "It will be nice to get back and it will be fun to relate to patients and colleagues." Yet, the return to practice has been a two-edged sword. Dr. D mentioned the concern expressed by some physicians about

losing their practices. Generally, this has not been the case. As Dr. K said, "My schedule is full of people who want to return to my care now that I am coming back." This quick return of patient volume has forced Fellows into a rapid transition from a slow, unstructured pace to a hectic practice. Dr. D began to 'feel swamped and back in the same old grind.' Dr. K found the first two weeks to be "stressful and traumatic." He had "forgotten what it was like to be under pressure and to have one's time structured by other people."

Most of the Fellows had developed interests and ideas they wished to pursue in their practice situations. Some encountered resistance to changes they wanted to make and this resistance had to be overcome. Many Fellows found themselves over-extended as they attempted to pursue their new interests within a hectic practice. They have taken several routes to addressing this problem. Some, such as Dr. K, are "struggling to find ways to delegate," but have not yet found completely satisfactory resolutions. Others, such as Drs. D and G, have convinced their colleagues to recruit additional physicians for their practices.

Thus, pervasive and consistent patterns have been observed, despite wide variations in interests and circumstances. Fellows tend to experience considerable discomfort as they make the transition from the physician to the student role and the transition from a structured practice situation to a relatively unstructured Fellowship situation in which they must determine their own goals and directions. They must fit into the fabric of clinical training, in which they are a unique group, neither medical student nor

resident. Therein, they must clarify goal and role expectations with preceptors who as yet have ambiguous conceptions about their status and needs. Upon their return to practice, they experience difficulties in making the transition to a hectic practice schedule; they may become over-extended as they attempt to pursue new-found interests; they may encounter resistance to changes they would like to make. Most Fellows do eventually resolve these difficulties through processes of adjustment. Many believe that making these adjustments constitutes a fundamentally important learning process which may help to account, in part, for the impressive, and unexpected, outcomes in the areas of community benefit and professional renewal.

What Special Problems Have Been Noted?

Despite the clear successes of the Program, it has not had the number of applicants envisioned or desired. The Bush Foundation had allocated funds for 12-15 Fellowships per year. Yet, in the first three selection cycles, out of 28 viable applications, only 17 Fellowships were awarded. Board members and Fellows suggest that this situation is symptomatic of the real problems that rural physicians have in leaving their practices for any extended period of time for professional renewal. Many note that physicians fear the loss of their practices in what is viewed as an increasingly competitive practice environment. Furthermore, mid-career physicians, with children in college, typically have heavy financial obligations. Some suggest that financial constraints are <u>not</u> the main impediments to leaving practices (since the Bush Fellowship support is generous), but rather emotional ties to patients and fear of change or failure. One Board member

commented, "Physicians have strong emotional ties to patients who are a source of continuity and support. They know they should leave their practices for a period of time, but their need for renewal conflicts with fears of breaking ties with patients, fear of failure, and fear of taking a chance." Some suggest that physicians in groups, who are "married" to their partners feel reluctant to ask their partners to cover for them. Similarly, solo practitioners have had difficulty obtaining practice coverage. Many suggest that the decision to take a sabbatical involves major dislocations. As Drs. D and K comment, 'It's difficult to muster forth the energy and overcome inertia.' Potential Fellows also confront issues related to family and living arrangements. In addition to these fundamental issues, many suggest that potential Fellows may simply not have sufficient knowledge about the Program in terms of <u>their own personal circumstances</u>. As the Program Administrator has commented, "We made the naive assumption that we could proclaim the opportunity and have an immediate effect. That turns out not to be true."

An associated problem is that despite extensive efforts, two Fellows were unable to find adequate practice coverage and had to truncate their intended programs. The actual commitment to absence from practice for a prolonged period of time is more difficult than had been anticipated, particularly for solo practitioners or physicians in small groups. The issues associated with this situation are crucial to address since they also effect recruitment of physicians into the Program. As one Board member commented, "A major problem is the failure of the Program to adequately reach 'grass roots' doctors in solo or small group practices." Another asked, "How do we help Dr. X to get away? It will be a challenge for the

Policy Board to make mid-career sabbaticals truly practical for those who dream of getting away. The need is there; some parameters to make it possible are there, but some barriers are still in place."

Another issue relates to guiding Fellows. As discussed earlier, Fellows experience considerable discomfort, indeed floundering, in the transitions from practice to Fellowship and from Fellowship to practice. Much of this discomfort appears to focus on difficulty in determining program directions and goals, difficulty in communicating expectations to preceptors, and difficulty in fitting into the fabric of clinical training. Fellows also experience the emotional difficulties associated with sudden role shifts. To what extent and in what ways should the Program administration attempt to ameliorate these difficulties through guiding Fellows?

Currently, guidance takes place in several forms and contexts. Subsequent to Policy Board screening of applicants, questions are typically posed to applicants directed toward helping them to focus their programs and goals, with a view towards optimizing professional and community benefit; selection seminar interviews typically serve the same functions. The program administrator has played a major role in helping Fellows shape programs, through site visits and correspondence before the selection seminar, and meetings during Fellows' programs. Further, before beginning their programs, each Fellow meets with the program administrator and evaluator to define goals and evaluation criteria; subsequent in-depth interviews are intended to help Fellows assess progress and future directions. Nevertheless, Fellows still experience discomfort related to defining Program

directions and to the problems assiciated with sudden role shifts.

There are different stances one could take concerning guidance of Fellows, and the related issues of Program concreteness and flexibility. The Policy Board and administration could help Fellows to narrow content areas and goals even before the selection seminar and commit Fellows to follow through on their plans, thereby helping them to make the best use of their time. Clearly, however, the problems Fellows have in structuring programs are, in fact, meaningful learning experiences, which may be of value in enhancing their professional lives. There is a fine line between helping Fellows make the most effective use of their time through guidance and support and prematurely terminating an intrinsically valuable process of adaptation.

CONCLUSIONS AND IMPLICATIONS

The actual Program outcomes to date are impressive in terms of community benefit, individual development and renewal, and community linkages with host institutions. It could be argued that the assessment of community benefit in terms of direct patient care is suspect, since direct patient care outcomes are most adequately assessed through such methods as chart audits or quality of care assessments. This is true. However, these evaluation methods would not have been feasible in assessing a Fellowship program, with Fellows who practice in communities sprinkled all over the state, who have pursued diverse programs directed towards diverse goals. Nonetheless, we contend that this assessment of community benefit in terms of direct patient care, through physicians' reports of

refined skills, use of new approaches, and new-found confidence is meaningful and strongly suggestive (on a "ladder of assumptions") of improved patient care. Given the positive outcomes to date, this type of program has the potential to be a prototype for continuing education that will contribute in significant ways to improvement of rural health care delivery. Further goal-oriented and case-study evaluation of this Program is needed to validate these themes with larger numbers of Fellows, to assess long-term outcomes, to determine the predictors and conditions of success, and to assess the feasibility of this approach as a practical approach to continuing education for large numbers of physicians. Hopefully, documentation of the impact of this foundation sponsored program will serve as an impetus for physician practice groups to develop their own sabbatical programs.

This program has the potential to serve as a prototype for continuing education and mid-career development of physicians, as well as other professional groups such as lawyers, nurses, and dentists who do not currently have institutionalized sabbaticals. The evaluation approaches themselves may provide guidance for assessing fellowship programs which, until recently, have not been systematically evaluated.

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TABLE I

Capsules of Fellows' Professional Data, Fellowship Programs, and Areas of Emphasis.

Dr. A, Age 52. In practice 20 years in same community. Family physician in group of three physicians. Former president of the Minnesota Academy of Family Physicians (1975-76). Rural Physician Associate Program (RPAP) preceptor. Mayo preceptor and lecturer. Goal areas: hospice care, cardiology, diabetes, geriatric care, oncology, precepting. Program time frame: September-October, 1980; part time, December 1980-June 1981. Major program components: cardiology preceptorship, St. Louis Park Medical Center (SLPMC), St. Louis Park, Minnesota, (one month); advanced cardiac life support class; observation at Diabetes Education Center, SLPMC (one week); preceptorship at Hospice-St. Paul (two to three weeks); attendance at Third Annual Hospice Organization Conference; attendance at various hospice meetings.

Dr. B, Age 52. In practice 25 years in same community. Family physician in group of nine physicians. School board member. Hospital family practice leader. Goal areas: basic sciences--immunology and pharmacokinetics--related to allergy; allergy; dermatology; patient education; independent learning. Program time frame: September 1, 1980-February 29, 1981. Major program components: Mayo Clinic: "Visiting Clinician" in allergy, asthma, dermatology; attendance at medical school lectures in immunology, cardiology, pulmonary medicine, cutaneous system; observation of patient education program. St. Louis Park Medical Center: preceptorship in allergy, dermatology. Attendance at conference on family practice care of asthma patients (San Diego).

Dr. C, Age 57. In practice 24 years in same community. General practitioner in solo practice. RPAP preceptor (three years). President, Southwestern Minnesota Medical Society. Chief of Staff, local hospital. Goal areas: cardiology, emergency medicine. Program time frame: part time July 1, 1979 to June, 1980 (contacts with potential cooperating institutions with expenses paid, but no stipend); part time June 1980-June 1981. Major program components: cardiology preceptorship, Sioux Falls (two weeks); emergency meeicine seminar, San Francisco (five days); trauma seminar, University of Minnesota (UM) (five days); cardiology preceptorship, St. Paul-Ramsey Medical Center (SPR) (eight days); one- to two-day preceptorships in Sioux Falls.

Table I continued

Dr. D, Age 48. In practice 22 years in same community. Family practitioner in group of six physicians. Delegate, Minnesota Academy of Family Physicians. School board member. Chief of Staff, local hospital. Medical director, rehabilitation center. Medical director, nursing home, Regional director, RPAP. RPAP preceptor (five years). Team physician. Goal areas: cardiology, pulmonary medicine, sports medicine, fitness, preventive medicine, patient education, diabetes, teaching. Program time frame: September 1, 1979-February 29, 1980. Major program components: pulmonary medicine preceptorship, UM (two months); cardiology preceptorship, Hennepin County Medical Center (HCMC) (two months); observation of coronary care unit, SPR (eight days); neonatal intensive care preceptorship, UM (one week); orthopaedics preceptorship, HCMC (one month); cardiovascular disease continuing medical education course, UM; cardiovascular risk conference, UM; chest radiology course, UM; study at UM Laboratory of Physiological Hygiene--smoking prevention program, cardiovascular risk program, Mr. Fit, and exercise physiology.

Dr. E, Age 48. In practice 20 years in same community. Internist in group of 17 physicians. President, county medical society. Co-initiator/medical director, periodic community hypertension screening surveys. Medical supervisor, YMCA cardiac rehabilitation program. President, Kiwanis (1969-70). Coordinator, CME Seminars (1973-78). Goal areas: cardiology in community setting, including prevention, diagnosis and management; education--patients, in-service, continuing medical education. Program time frame: October 1979-March 1980; additional two months at time to be determined. Major program components: Mayo Clinic, "Visiting Clinician" in cardiology; study use of echocardiography and Swan-Ganz catheters at Northwestern Hospital (NW). Observation at UM Laboratory of Physiological Hygiene; attendance at risk factor identification conference, UM. Attendance at cardiovascular care conference, UM; Minnesota Medical Association (MMA) seminars for directors of medical education.

Dr. F, Age 57. In practice 24 years in same community. Pediatrician in group of 25 physicians. County health officer. Director at Large, School District. Southeastern Minnesota Health Advisory Commission. School physician. Goal areas: viral and bacterial infectious diseases--epidemiology, identification, vector control, surveillance; public health and role of public health offider; childhood development, particularly high risk infants, failure to thrive, sudden infant death syndrome, child abuse, behavior problems, handicapped children. Program time frame: August-September, 1980; March-April, 1981. Major program components: rotations in Minnesota Department of Health; meetings with specialists in viral diseases and bacterial diseases, UM; pediatrics infectious disease course, UM; fellowship in ambulatory pediatrics, handicaps, pre-school and school functioning,

Table 1 continued

Harvard Medical School (HMS); developmental-behavioral pediatrics course, HMS; course in managing children's/adolescents' psychological crises, HMS.

Dr. G, Age 37. In practice 11 years in same community. Family practitioner in group of 13 physicians. Instrumental in building group and developing "model small town hospital" with emergency room post-anesthesia recovery room, and coronary care unit. President, practice corporation. Hospital board member. Preceptor, RPAP and second-year medical students. Goal areas: cardiopulmonary crises, anesthesia, psycho-social problems, neonatal intensive care, computer technology, death and dying, chemical dependency, teaching, basic learning skills, career development. Program time frame: September 1, 1979-May 31, 1980. Major program components: cardiology and respiratory courses for second-year medical students, UM; biomedical computing course, UM; dynamics of marriage and family course, UM; graduate respiratory physiology course, UM; basic and advanced cardiac life support classes; independent study of exercise stress testing, appraisal of respiratory function, and anesthetic agents; function as resident in anesthesia at SPR (two and one-half months); cardiac arrythmias course, UM; visits at several chemical dependency treatment centers--St. Johns, St. Marys, Glenwood Hills, North Memorial, Hazelden; observation of coronary care unit, SPR; preceptorship at neonatology service, St. Paul Children's Hospital.

Dr. H, Age 45. In practice 16 years, 10 years in same community. Family practitioner with one other physician. Clinical Associate Professor, Department of Family Practice and Community Health, UM. Preceptor to medical students and nurse practitioners. Used nurse practitioners within practice. Developed hospice and day-care center. Delegate: President's Council on Aging. Goal areas: geriatrics--discipline; theories of aging; basic sciences; clinical knowledge and skills; preventive medicine; social, economic, and demographic aspects of aging; physician role. Program time frame: September 9, 1980-September 1981. Major program components: function as third-year resident in multidisciplinary team at Deerlodge Hospital, University of Manitoba, as Clinical Fellow in Geriatric Medicine.

Dr. I, Age 54. In practice part-time 13 years in same community. Solo pedatric allergist, in clinic setting, with other physicians for consultation. Active member of the American College of Allergy. Goal areas: update in allergy, immunology, pulmonary medicine; expand to full-time practice, with

Table I continued

increased scope in adult allergy, immunology, and dermatology. Program time frame: September 11, 1979-May 31, 1980, 80 percent time Fellowship and 20 percent time in practice. Major program components: allergy and dermatology outpatient preceptorships UM, VA, SPR; medical school immunology course, UM; respiratory conference, UM; rheumatology conference, UM; annual allergy course, UM.
Dr. J, Age 56. In practice 10 years, 6 years in same community. Solo practice in general medicine and surgery. Goal area: microsurgery techniques. Program time frame: January 1980. Major program components: microsurgery preceptorship, University of California, San Diego.
Dr. K, Age 46. In practice 20 years, 18 years in same community. Family practitioner in group of nine physicians. Principal investigator, grant from National Center for Health Services Research to study the use of interactive television in health care delivery. Chief of Staff, local hospital. Preceptor, Mayo students and SPR family practice residents. Goal areas: upgrade clinical knowledge and skills to feel competent as a family physician; learn "state of the art" of emergency medicine--clinical, administrative--to upgrade the local hospital emergency service. Program time frame: September 1, 1979-August, 1980. Major program components: observation and preceptorships in various emergency rooms--Waconia, North Memorial, HCMC, SPR, Mayo Clinic, Los Angeles County Hospital, Harbor General Hospital, Long Beach Hospital, Kaiser group, Novata Community Hospital. Short seminars, conferences, reviews and preceptorships in a variety of clinical and administrative areas: advanced life support, adolescent medicine, basic sciences, cardiology, dermatology, ENT, emergency room principles and procedures, electrocardiography, family practice review, genetics, negotiation, neonatal care, pediatrics, plastic surgery, psychiatry, psychotherapy, pulmonary medicine, radiology, renal disease, rheumatic diseases, sexuality, wellness. Independent study. Administration: director, local emergency room; Chief of Staff, local hospital; Chair, MMA Directors of Medical Education Seminars planning committee; Chair, Foundation for Health Care Evaluation education committee. Education: director, continuing medical education at local hospital; member of committee to write SPR family practice residency objectives.

TABLE II

Community Benefit Outcomes: Community or Practice Group

Outcomes	Fellows (coded identities)										
	A	B	C	D	E	F	G	H	I	J	K
Anesthesia Service--Upgrading							x				
Chemical Dependency--Outpatient Treatment Program							x				
Computer Technology Applications							x				
Education - Administration											x
Education--Clinic Patient Education		x		x	x	x					
Education--Community/Schools				x	x	x	x				x
Education--Medical/Nursing Students							x		x		
Education--Physicians	x	x		x	x	x	x	x	x		x
Education--Other Health Personnel	x	x		x	x	x	x	x	x		x
Emergency Service--Upgrading											x
Epidemiology/Infectious Diseases--Community Control Program						x					
Hospice Care/Geriatric Care	x							x			
Practice Group--Contrib. Resources	x	x		x	x		x		x		x
Practice Group--Leadership				x	x		x		x		x
Public Health--Leadership						x					
School Programs--Stimulate/Develop New Programs				x		x					

TABLE III

Community Benefit Outcomes: Application of New/Refined Knowledge in Direct Patient Care and Clinical Contact with Colleagues

Outcomes	Fellows (coded identities)										
	A	B	C	D	E	F	G	H	I	J	K
Allergy, Asthma, Immunology, Pulmonary Medicine		x		x			x		x		x
Anesthesia							x				
Cardiology Care	x		x	x	x		x				x
Dermatology		x							x		x
Diabetes Care	x			x							
Emergency Care			x				x				x
Geriatric Care	x							x			
Infectious Diseases						x					x
Microsurgery										x	
Neonatal Care				x			x				x
Pediatrics						x					x
Preventive Medicine		x	x	x							x
Sports Medicine				x							

TABLE IV-A

Individual Benefit Outcomes

Outcomes	Fellows (coded identities) A	B	C	D	E	F	G	H	I	J	K
Professional/Personal "Renewal"	x	x	x	x	x	x	x	x	x	x	x
Excitement/Joy about Enhanced Interests and Skills	x	x	x	x	x	x	x	x	x	x	x
Improved/Altered Practice Situations		x		x	x	x	x	x	x		x
Enhanced Study/Update Skills	x	x	x	x	x	x	x	x	x		x
Desire for Further Preceptorship Experiences	x	x	x	x	x	x	x		x	x	x
Positive Impact on Family Relationships				x		x	x	x			x

TABLE IV-B

Collegial/Referral linkages with Physicians at Host Institutions

Outcome	Fellows (coded identities) A	B	C	D	E	F	G	H	I	J	K
Collegial/Referral Linkages	x	x	x	x	x	x	x	x	x	x	x

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